

Southeastern Software & Systems Engineering Conference
May 13, 2008
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**“50 Cents, 50 Years”
Finding the Value of the Space Program on the Back of a Quarter**

Good afternoon. I am very grateful to have the chance to speak with you at the 2008 edition of the S3E conference, and I hope you are enjoying your lunch.

This is indeed a lunch-time talk, and I don't want to intrude on your eating too much. But I would like to ask you to take out any loose change you happen to have in your pocket, separate out the quarters, and lay them face down on the table, so that you can see the backs of the coins you have with you today.

This is the 50th anniversary of NASA. And in those fifty years, we have built quite a compelling story to tell.

The story is familiar, but never dull, to anyone who has followed the history of the American space program:

A collection of immigrants, displaced by war, – refugees from a wholly defeated and obliterated Nation – moved to the pre-civil-rights American south and began working on a new transportation system that would eventually enable humans to leave the planet. They launched this nation's first satellite – and at the same time this nation's first space-science experiment – after being given 90 days to do the job, in response to the Russian launch of Sputnik.

Aboard a rocket that bears the name “Redstone” they put the first American into space. They responded to the challenge of an American President, putting a human on the Moon and returning him safely before the end of the 1960's, and just 10 years after becoming the first American in Space, the very same man – Alan Shepard – himself, walked on the Moon.

All the while, NASA was growing beyond its roots, becoming an institution with a narrative in its own right, sending six crews to the lunar surface, dramatically saving a seventh from an extremely perilous condition. NASA spacecraft began to voyage to other planets in the solar-system. We built a space station called Skylab, learning to live and work in space. We flew a joint mission with the Russians, who at the time were our most formidable and feared political and military enemy. We demonstrated the ability to build and fly a reusable spacecraft, deploying satellites like Hubble Space Telescope, Gamma Ray Observatory, Magellan, Ulysses, and Galileo. We have built a home in space and are living and working there – over 6 years continuously – in partnership with nearly all the space-faring nations of the world. We have flown the shuttle successfully over 120 times.

Today, we now embark on the next step of this narrative, pushing it into the future, consistent with the themes and ideas that fortified the past, with the construction of the Ares transportation system, and a return to human exploration beyond low-Earth orbit.

This narrative – one of exploration, of pushing the boundaries of what is possible, and growth through the meeting of extreme challenges – is not just a hallmark of the story behind NASA, but it is indeed an important part of the narrative of our Nation. It is part of what makes us who we are.

And I think I can illustrate this simply by looking at the change in your pocket. If you're like me, you probably have a few, perhaps two quarters, and maybe one of them is associated with the "state quarter series." What do you happen to have?

My kids collect state quarters, and I have over 40 of them with me today. These are interesting, because in many ways, they illustrate the narrative of our Nation. In aggregating these 50 snapshots, we have a very complete, if not detailed, picture of what the Nation has become since our founding. Each of these 50 quarters (o.k., I only have 40) are vignettes of things *that actually happened* as a result of the formation of this Nation. They are the 25-cent paperback (or quarter-back), Cliff-notes version of the story of America.

As with the narrative of NASA, the narrative of our Nation, expressed 25 cents at a time, has exploration as a prominent theme.

The space shuttle is on the back of the Florida quarter. In addition to Florida, Maine, Virginia, and Rhode Island all depict sailing ships. The word "Discovery" appears twice. Wisconsin's says "FORWARD" in big block letters. Nebraska features a covered wagon. My home state, Missouri, depicts the Lewis and Clark Corps of Discovery paddling up the Missouri river. And the only man-made object to appear twice – the Wright Brothers' Flyer – graces the back of Ohio (where you'll also find a moon-walking astronaut) and North Carolina.

You can quibble with any of these as an individual. I'm not too hot on Mississippi's "Magnolia leaves", for example. But as an ensemble, I find it very hard to argue against the fact that those 50 snap-shots are a view of what this Nation has become in 225 years. They offer us a tangible view of the things that became reality because of our history, the risks we took, and the sacrifices that many have endured. A view we carry around in our pockets every day, mostly without thinking, despite our collective national penchant for nostalgia. Yet that view is very, very compelling.

Helen Keller is on our quarter today. My question to you is what will be the back of Alabama's quarter next time? Or what will be on the back of *any* quarter for that matter?

Call me crazy, but I cannot see how just about anything we hold "important" today will make it. Not Hannah Montana nor Joe Montana (we don't see Shirley Temple or Babe Ruth); not Harry Potter (aside from the fact that he's not the product of an American writer, we don't even see Huckleberry Finn or Holden Caulfield) ; (certainly) not Paris Hilton; not Bill Gates or Warren Buffett (we don't see Cornelius Vanderbilt, John D. Rockefeller, or Andrew Carnegie).

But I could see the Ares-V...or an imprint of a human outpost on the Moon.

What will this nostalgia-crazed Nation do when it comes time to put some snippets of what we have become on the *next* set of quarters?!!!!

I would argue that we should actually not be focusing on the backs of quarters, of course, but instead on what we want this Nation to become, because whatever winds up on the back will be a product of the National narrative that we are charged here, today, to write and to bring into being.

Our Nation has had plenty of things in the past National Narrative that do not go on the back of quarters – "major" things – like Human Slavery or the plight of this Continent's indigenous people;

and lesser things like Tea-Pot Dome, Watergate, or the “rationale” behind starting the Mexican-American War.

These other things – the parts of the narrative that are not positive – are not unique to the past. We have plenty today – the home mortgage crisis, the scourge of drugs and drug abuse, the inability of many of our citizens to have health care, poor science/math/education test scores, a lower-life expectancy than most of Western Europe, and gasoline that’s nearing \$4 per gallon.

The lesson in looking at the back of the state quarter series is not that the Nation did not have problems, or things about which not to be proud, but that while working on these problems, the Nation also committed itself to a bold, positive, and sweeping set of outcomes – many of which were nearly unimaginable – that we actually made happen, for the betterment of our people.

Today’s problems are often cited as a reason *not* to invest in the future. We cannot have a robust space program because – you pick it – we need to fund education. We have too much crime. Single parents are finding it impossible to make ends meet. Kids are going to school hungry.

I cannot disagree with the seriousness of *any* of these issues. They matter, and they matter a lot. But in the long run of what this Nation is going to become, we will find that obsession with consumerism, four hours of television a day, and staying glued to CNN will not fix anything.

We cannot “repair” our way to prosperity in the future.

At the same time we are fixing what ails us, we must also build for what we want to become, and the space program is one excellent place to make these investments. You need to look no farther than the back of the quarters in your pocket to see what exploration – and in particular space exploration – mean to who we are as a people. We carry it around with us every day.

I mentioned that our Nation is nostalgia-crazy. It is front page news when the McDonalds Arch from the 1950’s is removed from the side of Memorial Parkway. Chuck Berry is still on tour. Our modern Major League Baseball stadiums are all “retro.” We have wonderful museums -- just walk through the Smithsonian to bathe in the history of our Nation. We have a great museum here in Huntsville dedicated to the Saturn V and the history of space exploration. The “History Channel” is one of the most popular on TV. Even 1970’s clothes are back in style!!

Investment in space, science, and exploration is one way in which we can build a future for our Nation that is worthy of any kind of nostalgic sentiment. It is a compelling part of a future that will be worthy of our past.

This is why I believe it is so imperative that we stay the course with this vision for space exploration, now expressed as National Space Policy through the authorization of Congress. It is sensible. It is scalable. It is affordable. It is achievable.

And it promises to take this Nation to places we have not been, to give her citizens hope for a brighter and more compelling future, and to create untold positive social, economic, educational, and quality-of-life outcomes for all mankind.

I look forward to working with all of you to help build a future worthy of our past.

And if you forget, simply reach into your pocket for a quick 25 cent reminder of where we have been, and how far we can go.

Thanks for your time this afternoon, and enjoy the rest of the conference.

SDMetrics Entry - Presentations

Title: "50 Cents, 50 Years" Finding the Value of the Space Program on the Back of a Quarter

Presenters: J. M. Horack

Conference Name: Southeastern Software & Systems Engineering Conference

Location: Huntsville, AL

Conference Start Date: 5/12/2008

Conference End Date: 5/14/2008

Date Presented: 5/13/2008

Conference Proceedings to Follow: No

Organization: VP01